

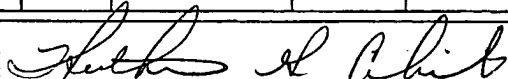
Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Complete if Known	
	Application Number	09/760,010
	Filing Date	January 10, 2001
	First Named Inventor	Steven H. Bass
	Group Art Unit	1644
	Examiner Name	Unassigned
	Attorney Docket Number	02-100620US

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
Rec	AA	5,512,463		Stemmer	04-30-1996	
	AB	5,514,588		Varadaraj	05-07-1996	
	AC	5,605,793		Stemmer	02-25-1997	
	AD	5,763,239		Short et al.	06-09-1998	
	AE	5,789,228		Lam et al.	08-04-1998	
	AF	5,811,238		Stemmer et al.	09-22-1998	
	AG	5,814,473		Warren et al.	09-29-1998	
	AH	5,824,469		Horwitz et al.	10-20-1998	
	AI	5,830,696		Short	11-03-1998	
	AJ	5,830,721		Stemmer et al.	11-03-1998	
	AK	5,834,252		Stemmer et al.	11-10-1998	
	AL	5,837,458		Minushull et al.	11-17-1998	
	AM	5,866,363		Pieczenik	02-02-1999	
	AN	5,876,997		Kretz	03-02-1999	
	AO	5,925,749		Mathur, et al.	07-20-1999	
	AP	5,928,905		Stemmer, et al.	07-27-1999	
	AQ	5,939,250		Short, Jay M.	08-17-1999	
	AR	5,939,300		Robertson, et al.	08-17-1999	
	AS	5,942,430		Robertson, et al.	08-24-1999	
	AT	5,948,666		Callen, et al.	09-07-1999	
	AU	5,958,672		Short, Jay M.	09-28-1999	
	AV	5,958,751		Murphy, et al.	09-28-1999	
	AW	5,962,258		Mathur, et al.	10-05-1999	
	AX	5,962,283		Warren et al.	10-05-1999	
	AY	5,965,408		Short, Jay M.	10-12-1999	
	AZ	5,985,646		Murphy, et al.	11-16-1999	
	BA	6,001,574		Short et al.	12-14-1999	
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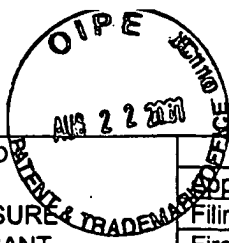
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BB	6,004,788	Short	12-21-1999
BC	6,030,779	Short	02-29-2000
BD	6,054,267	Short	04-25-2000
BE	6,057,103	Short	05-02-2000
BF	6,096,548	Stemmer	08-01-2000
BG	6,117,679	Stemmer	09-12-2000
BH	6,132,970	Stemmer	10-17-2000
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BK	6,171,820	Short	01-09-2001
BL	6,174,673	Short, et al.	01-16-2001
BM	6,180,406	Stemmer	01-30-2001
BN	6,238,884	Short et al.	05-29-2001

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		Office	Number	Kind Code (if known)				
BO	WO	97/07205			Novo Nordisk A/S	02-27-1997		
BP	WO	97/20078			Affymax Technologies	06-05-1997		
BQ	WO	97/25410			Novo Nordisk A/S	07-17-1997		
BR	WO	97/35957			Maxygen, Inc.	10-02-1997		
BS	WO	97/35966			Maxygen, Inc.	10-02-1997		
BT	WO	97/44361			Recombinant Biocatalysis Inc.	11-27-1997		
BU	WO	97/48416			Recombinant Biocatalysis, Inc.	12-24-1997		
BV	WO	97/48717			Recombinant Biocatalysis Inc	12-24-1997		
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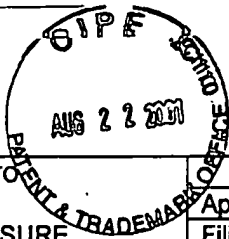


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	CC	WO	98/27230		Maxygen, Inc.	06-25-1998		
	CD	WO	98/28416		Novo Nordisk A/S	07-02-1998		
	CE	WO	98/31837		Maxygen, Inc.	07-23-1998		
	CF	WO	98/36080		The Dow Chemical Company	08-20-1998		
	CG	WO	98/41622		Novo Nordisk A/S	09-24-1998		
	CH	WO	98/41623		Novo Nordisk A/S	09-24-1998		
	CI	WO	98/41653		Novo Nordisk A/S	09-24-1998		
	CJ	WO	98/42832		California Institute of Technology	10-01-1998		
	CK	WO	98/48034		Diversa Corp.	10-29-1998		
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	CO	WO	99/10472		Diversa Corp.	03-04-1999		
	CP	WO	99/10539		Diversa Corp.	03-04-1999		
	CQ	WO	99/19518		Diversa Corp.	04-22-1999		
	CR	EP	0911396A2		Maxygen, Inc.	04-28-1999		
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	CU	WO	99/23107		Maxygen, Inc.	05-14-1999		
	CV	WO	99/23236		Diversa Corp.	05-14-1999		
	CW	EP	0934999A1		Maxygen, Inc.	08-11-1999		

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	Attorney Docket Number	02-100620US

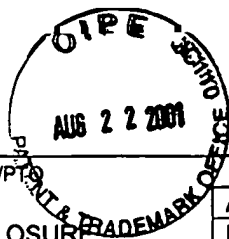
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	DB	WO	99/45154		Diversa Corp.	09-10-1999		
	DC	WO	99/57128		Maxygen, Inc.	11-11-1999		
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	DE	WO	00/42560		Maxygen, Inc.	07-20-2000		
	DF	WO	00/42561		Maxygen, Inc.	07-20-2000		
	DG	WO	00/53744		Diversa Corporation	09-14-2000		
	DH	WO	00/58517		Diversa Corporation	10-05-2000		
	DI							

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
See	DJ	Chang, C., et al. (1999) "Evolution of a cytokine using DNA family shuffling." <u>Nature Biotechnology</u> 17:793-797.	
	DK	Christians, F.C. et al., (1999) "Directed evolution of thymidine kinase for AZT phosphorylation using DNA family shuffling." <u>Nature Biotechnology</u> 17:259-264.	
	DL	Coco et al., (2001) "DNA shuffling method for generating highly recombined genes and evolved enzymes" <u>Nature Biotechnology</u> vol. 19 pp. 354-359	
	DM	Crameri et al., (1993) "10(20)-Fold aptamer library amplification without gel purification," <u>Nuc. Acids Res.</u> 21(18):4410.	
	DN	Crameri, A. & Stemmer W.P.C. (1995) "Combinatorial multiple cassette mutagenesis creates all the permutations of mutant and wildtype cassettes." <u>Biotechniques</u> 18:194-195.	
	DO	Crameri, A. et al. (1996) "Improved green fluorescent protein by molecular evolution using DNA shuffling." <u>Nature Biotechnology</u> 14:315-319.	
	DP	Crameri, A. et al. (1996) "Construction and evolution of antibody-phage libraries by DNA shuffling." <u>Nature Medicine</u> 2:100-103.	
	DQ	Crameri, A. et al., (1997) "Molecular evolution of an arsenate detoxification pathway by DNA shuffling." <u>Nature Biotechnology</u> 15:436-438	
	DR	Crameri, A. et al., (1998) "DNA shuffling of a family of genes from diverse species accelerates directed evolution." <u>Nature</u> 391:288-291.	

Examiner Signature		Date Considered	2/1/2005
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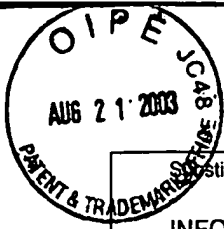


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DS	Gates, C.M. et al., (1996) "Affinity selective isolation of ligands from peptide libraries through display on a lac repressor 'headpiece dimer'. <i>Journal of Molecular Biology</i> 255:373-386.
DT	Minshull, J., Stemmer, W.P.C. (1999) "Protein evolution by molecular breeding." <i>Current Opinion in Chemical Biology</i> 3:284-290.
DU	Ness, J. et al., (1999) "DNA shuffling of subgenomic sequences of subtilisin." <i>Nature Biotechnology</i> 17:893-896.
DV	Patten, P.A. et al., (1997) "Application of DNA Shuffling to Pharmaceuticals and Vaccines." <i>Current Opinion in Biotechnology</i> 8:724-733.
DW	Pelletier, Joelle N., (2001) "A Rachitt for our toolbox" <i>Nature Biotechnology</i> vol. 19, p. 314-315
DX	Stemmer, W.P.C. (1994) "DNA Shuffling by random fragmentation and reassembly: In vitro recombination for molecular evolution." <i>PNAS</i> 91:10751
DY	Stemmer, W.P.C. (1994) "Rapid evolution of a protein in vitro by DNA shuffling." <i>Nature</i> 370:389-391.
DZ	Stemmer, W.P.C. (1995) "The Evolution of Molecular Computation." <i>Science</i> 270:1510
EA	Stemmer, W.P.C. (1995) "Searching Sequence Space." <i>Bio/Technology</i> 13:549-553.
EB	Stemmer, W.P.C. (1996) "Sexual PCR and Assembly PCR." In: <i>The Encyclopedia of Molecular Biology</i> . VCH Publishers, New York. pp. 447-457.
EC	Stemmer, W.P.C. & Soong, N.W. (1999) "Molecular breeding of viruses for targeting and other clinical properties." <i>Tumor Targeting</i> 4:59-62.
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	Application Number	09/760,010
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	First Named Inventor	Steven H. Bass
	Group Art Unit	1637
	Examiner Name	Jeffrey Siew
	Attorney Docket Number	0139.310US

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
HAC	1	4,591,567		Britten, et al.	05-27-1986	
	2	5,503,980		Cantor	04-02-1996	
	3	5,545,531		Rava, et al.	08-13-1996	
	4	5,585,275		Hudson, et al.	12-17-1996	
	5	5,591,646		Hudson, et al.	01-07-1997	
	6	5,712,171		Zambias, et al.	01-27-1998	
	7	5,763,263		Dehlinger	06-09-1998	
	8	6,403,312		Dahiyat et al.	06-11-2002	
	9	6,376,246		Maxygen, Inc.	04-23-2002	
	10	6,180,351		Cattell	01-30-2001	
	11	6,264,891		Heyneker, et al.	07-24-2001	
	12	6,270,961		Drmanac	08-07-2001	
	13	6,291,165		Borschert, et al.	09-18-2001	
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	16	2001/0041349		Patron, et al.	11-15-2001	
	17	2002/0042063		Kilian	04-11-2002	
	18	2002/0048749		Lipshutz, et al.	04-25-2002	
	19	2002/0055099		Fisher	05-09-2002	
	20	2002/0055112		Patil, et al.	05-09-2002	
	21	2002/0090649		Chan, et al.	07-11-2002	
	22	2002/0094533		Hess, et al.	07-18-2002	
	23	2002/0012926		Quake, et al.	01-31-2002	
	24	2002/0106667		Yamamoto, et al.	08-08-2002	
	25	2002/0119484		Weidenhammer, et al.	08-29-2002	
	26	2002/0142309		Dattagupta	10-03-2002	
	27	2002/0142314		Dong, et al.	10-03-2002	
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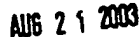
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	Group Art Unit		1637	
	Examiner Name		Jeffrey Slew	
Attorney Docket Number		0139.310US		

<i>Xac</i>	28	2002/0142339		Bardhan, et al.	10-03-2002	
	29	2002/0146704		Head, et al.	10-10-2002	
	30	2002/0150917		Weidenhammer, et al.	10-17-2002	
	31	2002/0150921		Barany, et al.	10-17-2002	
	32	2002/0160369		Dorsel, et al.	10-31-2002	
	33	2002/0164634		Patil, et al.	11-07-2002	
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	36	2002/0183934		Selifonov, et al.	12-05-2002	

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		Office	Number	Kind Code (if known)				
Xac	37	PCT	WO 00/23564		Xencor, Inc.	04-27-2000		
	38	PCT	WO 97/31256		Cornell Research	08-28-1997		
	39	PCT	WO 99/14318		Board of Regents, Univ. of Texas Sys.	03-25-1999		
	40	PCT	WO 98/54312		Babraham Institute	12-03-1998		
	41	PCT	WO 99/14373		Yale University	03-25-1999		
	42	PCT	WO 99/19341		Harvard College	04-22-1999		
	43	PCT	WO 99/58661		Diatech	11-18-1999		
	44	PCT	WO 99/60170		Hyseq, Inc.	11-25-1999		
	45	PCT	WO 00/18906		Maxygen, Inc.	04-06-2000		
	46	PCT	WO 00/42559		Maxygen, Inc.	07-22-2000		
	47	PCT	WO 00/52155		Maxygen, Inc.	09-08-2000		
	48	PCT	WO 01/79849		Trans Tech Pharma	10-25-2001		
	49	PCT	WO 00/48004		Maxygen, Inc.	08-17-2000		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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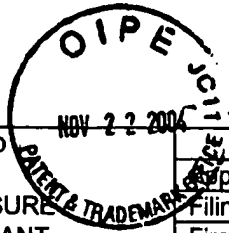
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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Signature**

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Hce	1	6,319,714		Crameri, et al.	11-20-2001	
	2	6,358,740		Patten et al.	03-19-2002	
	3	6,368,861		Crameri et al.	04-9-2002	
	4	6,413,745		Patten et al.	07-2-2002	
	5	6,423,542		Crameri et al.	07-23-2000	
	6	6,426,224		Crameri et al.	07-30-2002	
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